AMENDMENTS TO THE CLAIMS

Claim 1 (Currently Amended): A catalytically active amorphous porous solid, comprising:

a mixed oxide of silicon, aluminum, and phosphorous,

wherein the mixed oxide has

an atomic ratio Si/Al ranging from ~~10~~ 20 to 250, [[a]]

an atomic ratio P/Al ~~ratio~~ of at least 0.1 and not higher than 3.5,

a total pore volume ranging from 0.5 to 2.0 ml/g, with an average diameter ranging from 3 to 40 nm, and

a specific surface area ranging from 200 to 1000 m^2/g.

Claim 2 (Currently Amended): The solid according to claim 1, wherein, in the mixed oxide, said atomic ratio Si/Al ranges from ~~15~~ 20 to 200 and said atomic ratio P/Al ranges from 0.3 to 3.5.

Claim 3 (Previously Presented): The solid according to claim 1, wherein

said pore volume ranges from 0.7 to 1.7 ml/g, with an average diameter ranging from 5 to 30 nm, and

said surface area ranges from 300 to 900 m^2/g.

Claim 4 (Previously Presented): The solid according to claim 1, wherein the difference between 10% and 90% of the pore dimensions in the distribution curve is within a diameter range of 2 to 40 nm.

Claim 5 (Previously Presented): The solid according to claim 1, comprising at least 95% by weight of said mixed oxide and up to 5% by weight of at least one oxide of a metal selected from the group consisting of Ti, Zr, V, Cr, Fe, Co, Ni, Pt, Pd, Mo, Zn, Ga, and Sn.

Claim 6 (Previously Presented): A catalytically active solid composition comprising from 30 to 99% by weight of the amorphous porous solid according to claim 1, and from 70 to 1% by weight of an inert inorganic binder.

Claim 7 (Previously Presented): The composition according to claim 6, comprising from 50 to 80% by weight of said amorphous porous solid and
from 50 to 20% by weight of said inert inorganic binder.

Claim 8 (Previously Presented): The composition according to claim 6, wherein said inert binder is selected from silica, alumina, clay, titanium oxide (TiO_2), zirconium oxide (ZrO_2), boron oxide (B_2O_3), or mixtures thereof.

Claim 9 (Previously Presented): The composition according to claim 6, wherein said inert binder essentially consists of alumina.

Claim 10 (Previously Presented): The composition according to claim 6, having the form of pellets with a diameter of 2 to 5 mm and a length of 2 to 10 mm.

Claim 11 (Canceled)

Claim 12 (Currently Amended): ~~Use according to claim 11~~ A method of using a catalytically active amorphous porous solid, the method comprising contacting the solid of claim 1 with hydrocarbons in an alkylation process, an ~~isomeriztion~~ isomerization ~~processes~~ process ~~and in the~~ or an oligomerization ~~of hydrocarbons~~ process.

Claims 13-14 (Canceled)

Claim 15 (Currently Amended): A process for the preparation of a porous solid according to claim 1, comprising the following in succession:

(i) preparing an aqueous mixture comprising a tetra-alkyl ammonium hydroxide, a hydrolyzable aluminum compound, a hydrolyzable silicon compound and an oxygenated compound of phosphorus in such proportions as to have an atomic ratio Si/Al ranging from ~~10~~ 20 to 250 and [[a]] an atomic ratio P/Al ~~atomic ratio~~ ranging [[of]] from 0.1 to 3.5, and a sufficient quantity of water to dissolve and hydrolyze said compounds;

(ii) heating said mixture in an alkaline environment, so that there is essentially no exchange of material with the outside, to obtain the formation of a gel; and

(iii) drying and calcinating the gel of (ii) to obtain the desired amorphous porous solid.

Claim 16 (Previously Presented): The process according to claim 15, wherein

said aluminum compound is an aluminum trialkoxide comprising from 1 to 10 carbon atoms in each alkoxide residue,

said hydrolyzable silicon compound is a silicate of at least one hydrocarbon residue, comprising from 1 to 10 carbon atoms for each alkyl residue, and

said oxygenated compound of phosphorus is a phosphoric or a phosphonic salt, or an ester, or a corresponding acid.

Claim 17 (Previously Presented): The process according to claim 16, wherein said phosphorus compound is an ammonium salt or an ester of the phosphoric or phosphonic acid wherein each alkyl residue comprises from 1 to 10 carbon atoms.

Claim 18 (Currently Amended): The process according to claim 15, wherein, in ~~(I)~~ (i), the following atomic or molar ratios are used:

Si/Al from 10/1 to 250/1,

~~tetraalkyl~~ tetra-alkyl ammonium hydroxide/Si from 0.05/1 to 0.2/1,

H_2O/Si from 5/1 to 40/1, and

P/Al from 0.1 to 5.0.

Claim 19 (Previously Presented): The process according to claim 15, wherein in (i), the mixture is heated to a temperature ranging from 30 to 80°C until a limpid solution is obtained.

Claim 20 (Previously Presented): The process according to claim 15, wherein, in (ii), said heating is effected at a pH ranging from 11 to 12 and to a temperature ranging from 60 to 120°C, operating in a closed vessel at autogenous pressure of the system, or at atmospheric pressure with refluxing, for a time ranging from 10 minutes to 3 hours.

Claim 21 (Previously Presented): The process according to claim 15, wherein, in (ii), an alcohol, having from 1 to 10 carbon atoms, is added to the mixture up to an alcohol/Si ratio of 8/1.

Claim 22 (Previously Presented): The process according to claim 15, further comprising aging the gel from 1 to 24 hours at the end of (iii).

Claim 23 (Currently Amended): A process for the preparation of ~~the~~ a solid composition ~~according to claim 6~~ comprising

from 30 to 99% by weight of the amorphous porous solid according to claim 1, and

from 70 to 1% by weight of an inert inorganic binder,

the process comprising:

forming a mixture that comprises the from 30 to 99% by weight of the amorphous porous solid ~~according to claim 1~~, and the from 70 to 1% by weight of an inert inorganic binder.

Claim 24 (Previously Presented): The process according to claim 23, wherein said porous solid is in the form of a humid gel and is mixed with said binder with a weight ratio between the binder and the gel ranging from 0.05 to 0.5.

Claim 25 (Previously Presented): The process according to claim 23, wherein said mixture also comprises a plasticizing agent selected from methyl cellulose, stearine, and glycerol.

Claim 26 (Previously Presented): The process according to claim 23, wherein an organic acid is added to said mixture in a quantity ranging from 0.5 to 8 g per 100 g of binder.

Claim 27 (Previously Presented): The process according to claim 23, wherein said mixture is homogenized by mixing and heating to a temperature ranging from 40 to 90°C, until a paste is obtained, the paste is then extruded into cylindrical granules having a size of 2-10 mm in length and 0.5-4.0 mm in diameter, and is finally dried and calcined.